



Focus on Information Technology:

THE INTERACTIVE WORLD

Interactive multimedia is a buzz term in the communication world. But just what is it? What's it good for in terms of getting your bureau's message out? How practical is it for reaching your customers, clients, and stakeholders? How effective is it for employee training? Can your office, visitor center, or outreach program use it? Should you use it?

Don Marion, Interior Audio Visual Center

The world of interactive multimedia is wide, encompassing written text, graphics, animation, 3D objects, narration, sound effects, music, and video. We all know how effective each of these can be in conveying information or emotion. What interactive multimedia does is put some or all of those media together in a closely-knit program that makes conveying information more efficient, more impressive, and more effective.

The key to the process is making the user of the program an active participant, plunging ahead into the world of information in a way that he or she sees fit. Many studies have shown that, in general, we seem to remember about 20 percent of what we hear and 40 percent of what we hear and see, but 75 percent of what we hear and see and do. Interactivity provides all three of those critical channels to learning.

The most significant elements of interactivity will be covered in a series of articles so that each major facet can be treated. In this first segment, we'll discuss the basic concept of interactive multimedia and the questions to consider in deciding whether you should use interactive multimedia in one of your projects or programs.

Interactivity in obtaining and conveying information, of course, has been around a long time. Consider the various cross-references of a dictionary, for example, or, more appropriately, those of an encyclopedia.

There's nothing new about the concept of multimedia, either. Graphs, charts, and descriptive drawings to clarify and supplement the written or spoken word have been around for thousands of years.

Computer-Based Learning

When sound was dramatically added to moving pictures, a whole new world of entertainment—and documentation—was born. We all were exposed to multimedia presentations back in elementary school and some basic multimedia presentations of that nature are still effective—witness some National Park Service sound and light shows which convey information and emotion very effectively with a minimum of media and a lot of creative imagination.

What is new is the ability to deliver very complex programs with a full range of media—text, graphics, 3D objects, 2D and 3D animation, sound, and video—conveniently, easily, and cheaply. Also new is the ability to make programs available enough and versatile enough so that they can be used—widely, effectively, and productively—by people in different environments and with varied backgrounds, knowledge levels, and learning speeds.

Basically, this new capability has been brought about by the development and astounding growth of computer technology and its recent fusion with audio-visual media. The marriage of these two worlds—computers and audiovisuals—should prove to be one of the most significant developments of our age. Why? Because of the tremendous capability for imparting knowledge that this union brings.

Computer-based training has already been demonstrated as being one of the most, perhaps the most, effective training method available now—aside from having a dedicated, talented, patient expert at your side or looking over your shoulder.

Another significant advantage is the tremendous cost saving it makes possible. Instead of dispatching trainers around the country or organizing expensive seminars, a CD-ROM with the training course or module can simply be mailed.

There are two basic reasons for the successful application of interactive multimedia for training: first, the ability of every user to proceed at his or her own speed, repeating topics if necessary, following supplementary paths if that seems necessary for the mastery of a subject, or skipping sections if personal learning or knowledge surpass a program level's standard.

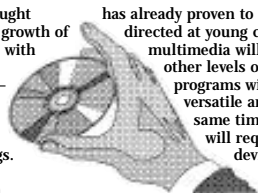
Engaging the Program Learner

The second reason for the success of interactive multimedia in training is the re-enforcement of the message of one medium by another medium or other media. For example, the illustration and clarification of written text or audible instructions by combining them with animation and sound effects.

That is precisely where the value of multimedia in interactive programs lies. A computer-based interactive program that is mainly text with only supplementary graphics is probably a waste of time and resources—except for the possible advantage of saving paper and mailing costs. But a program that combines a variety of media—and a variety of senses of the user—will be unsurpassed in conveying information or evoking a response.

And that's the heart of interactive multimedia: Its purpose is not simply to impart information but to engage users by creating an environment in which they become active participants, inspired to investigate the subjects or topics they are involved in and motivated to learn more about them. If that personal active involvement is realized, then interactive media is good not only for training but also for educating.

The use of computer-based multimedia programs for general education is still in its infant stage but



has already proven to be of value in programs directed at young children. While interactive multimedia will likely be very successful at other levels of education, effective programs will have to be immensely versatile and quite complex, while at the same time easy to navigate. They also will require vastly greater storage devices or ready access to immense libraries of information.

That's all certainly possible. The authorware necessary to accommodate such programs is available now; hard drive storage capacity has been increasing dramatically over the past few years; and ready access to virtually unlimited resources—through the internet, primarily—should soon become even more convenient and quicker. What's needed are higher-capacity distribution devices, higher-capacity internet access, and gifted program authors—all of which will be addressed later.

Interactive Media and Your Program

Whether you should use interactive multimedia for your project or information program depends on a number of things: the kind of information to be conveyed, including its scope and complexity; the nature of the targeted audience; and, of course, the proposed or expected delivery method or delivery sites and their facilities.

If the information to be conveyed is limited, straight-forward, or condensed, then a linear presentation, such as a videotape, is probably best. But if the content is multi-faceted, if there are many naturally discrete elements, or if there are many ingredients but audience members are likely to be interested in only some of them, interactivity could very well be the way to go.

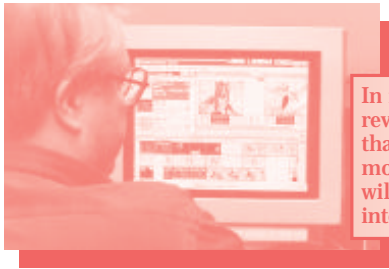
If the audience is made up of individuals from varied backgrounds, many members of the target group probably would appreciate the ability to peruse, skip, or repeat parts of the program at their discretion. Professional audiences may also value the ability to branch off to various sections of a program or to relate sections of the program in unusual ways, but in ways that best fit individuals' disparate backgrounds or immediate

needs.

Finally, if a message is aimed at individuals or small groups, interactivity may be more appropriate than it would be if the target is large groups. For example, a visitor center at a park, refuge, or recreation area that has a large variety of attractions or responsibilities, but serves only a small number of visitors, may be an ideal place to engage visitors—through interactive monitors—in the programs in which the agency is involved.

These are some of the considerations to bear in mind when evaluating the appropriate media for conveying your information. The advisability of using interactive multimedia also depends on the capabilities of various computer systems and related hardware. To look at that, we'll have to dive—although not too deeply—into some technical aspects of computer development so that there can be a modest understanding of the nature of interactive multimedia, some of the trends, and the tremendous breakthroughs that are dramatically changing it.

Don Marion can be reached at the AudioVisual Center at (303) 236-2001, or faxed at (303) 236-2005. Mail to P.O. Box 280982, Lakewood, CO, 80228.



In future issues of PLW, Don Marion will review technical trends and developments that are making interactive multimedia more feasible, practical, and effective and will delve into the process of putting an interactive multimedia program together.